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## DETAILED DESCRIPTION

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### [Detailed Description of the Invention]

The system and field this invention of method invention which supply the Television Sub-Division schedule information, Generally start the system and method for supplying information to the televiewer of television, and more in details. A televiewer A remote database, a computer network, or an on-line service, For example, the Television Sub-Division schedule information located in the network server of the Internet or World Wide Web is searched, searched and chosen, and the system and method of enabling it to have a dialog are started.

Since the number of television broadcasting stations in the explanation big city area or cable network of the advanced technology increased, the number of the programs with which a televiewer is provided and which are potentially interested increased remarkably. The number of the programs to which a televiewer can view and listen increased further with use of the dish antenna which can receive a satellite signal directly. As a result, in order for a televiewer to classify the program of these versatility and to carry out which program should be viewed, listened to or recorded, and help for which it opts, the Television Sub-Division schedule system by which direct supply is carried out to a televiewer's television screen was developed. One of such the Television Sub-Division schedule systems is indicated by US,5,353,121,B (Mr. Young etc.) which is taken up as reference here and which was transferred in common. The Television Sub-Division schedule is provided with a series of menu screens which have an array of the cell corresponding to a different TV program in one embodiment of Mr. Young. The televiewer can scroll a cell and can see which TV program whether sent to various channels at various time. The televiewer can choose a certain cell and can pull out other sub menus accompanied by OK or an additional choice for the further information about the related program.

The latest development of the Television Sub-Division schedule system like the above-mentioned patent of Mr. Young produced many new challenges and opportunities. Such one a challenge and an opportunity are providing a televiewer with the additional information relevant to a specific program in a television guide. The concerns relevant to an interested field or show specific when a TV viewer browses a TV program, For example, the travel package or advertisement pass the seller of the further information about other movies broadcast during a player, an actress, and the same time, or primary, secondary or a third party may be wished to have. However, it is difficult to supply this kind of information to a TV viewer. It is because a different program of what 100 is

broadcast every day. In order that the information acquired may change at a quick pace, it becomes still more difficult to supply this information to the present television schedule guide.

To converse with a televiewer is also desired in television broadcasting. For example, there are many commercials and programs which require the action of the televiewer of purchasing a door buster, contributing, answering investigation, replying to a question, or participating in a contest with other televiewers. One problem accompanying this existing system is that it is often difficult to carry out the motivation of the televiewer so that information may be required after broadcast of commercials or a program or contribution may be sent. The televiewer has often only lost the motive to forget an advertisement, to consume money or to require information, after commercials or a program is completed. Another problem is liking to often supply another information to a televiewer, when the company which is a sponsor of commercials or a program can identify a televiewer, or when a televiewer demands additional information. Therefore, to provide the efficient method that it is quick for exchanging information easily between a TV viewer, and a maker, a promoter and an advertiser and is desired during broadcast of commercials or a program.

Summary this invention of invention supplies the Television Sub-Division schedule information to visible Interface Division, A televiewer And a remote database, a computer network, or an on-line service, For example, the information located in the network server of the Internet or World Wide Web is retrieved, and it searches, and chooses, and the system and method of enabling it to have a dialog are provided. The Television Sub-Division schedule information can be displayed on various visible Interface Division, for example, a television screen, computer monitors, PCTV screens, etc. The Television Sub-Division schedule information A televiewer's computer, Television Sub-Division, PCTV or a remote server (for example, website) may memorize, or the Television Sub-Division schedule information may be downloaded from a remote database or a computer network to a televiewer's computer, Television Sub-Division, or PCTV. The system and the method a televiewer navigates the program guide displayed on a televiewer's television screen, for example, and enables it to have a dialog with it also provide this invention. A program guide includes the schedule information area which usually shows the program sent to each channel at each time between a day, a week, or the moon. The further information about the program which a televiewer browses a schedule information area with input devices, such as remote control equipment, pointing equipment, a mouse, a keyboard, or a microphone, and/or has specific concern can be acquired.

In one embodiment, this invention includes the interactive computer system which supplies the Television Sub-Division schedule information. All or a part of this Television Sub-Division schedule information is sent to television systems, a computer monitor, or PCTV. The Television Sub-Division schedule information can be used for an interactive computer system, and it can control various peripheral equipment of television systems.

Peripheral equipment is Television Sub-Division, a videotape recorder (one or more), a set top box (a cable box is included), etc., for example. In a desirable embodiment, the memory located in a personal computer memorizes a computer program and the received data. These data includes the Television Sub-Division schedule information. A processor

uses a computer program and composes the Television Sub-Division schedule information to a desired format. The Television Sub-Division schedule information ranks second, and is displayed on a television screen or a computer monitor display in a desired format.

In another embodiment, this invention can access the Television Sub-Division schedule information from a remote database, a network server, for example, the Internet, or World Wide Web, and. The interactive Television Sub-Division schedule system which can also give user access to these databases and a server is provided. Access to a computer network is given without needing a personal computer, without connecting any telephone wires. In desirable composition, the cable modem located in a cable system gives access to the Internet. The memory in a cable system memorizes, a computer program, and the data received from the cable modem, for example, Television Sub-Division schedule information. The cable system is further provided with the processor which composes the Television Sub-Division schedule information to a desired format using a computer program. The Television Sub-Division schedule information ranks second, and is displayed on a television screen, a computer monitor, or PCTV in a desired format.

In another embodiment, a user this invention A remote database, It links in context with a network server or an on-line service, and the system and method search the further information about the field or matter which is interested especially it related to the program of the Television Sub-Division schedule information system, and it enables it to choose are provided. A display for a system to display the Television Sub-Division schedule information on a televiewer in this embodiment, It has televiewer Interface Division which has the data line connected to this display in order to communicate with an external computer network, and a memory including the software for searching link data from a computer network. Preferably, link data relates to the title or the contents of the information on the Television Sub-Division schedule guide, for example, a program, in context. An external computer network contains the Internet, World Wide Web, and other existing network servers preferably. Thus, the user of the Television Sub-Division schedule system can perform a comprehensive search to the information about show, such as a theme of the information about the show of specific program/television or a player, an actress, and show.

According to another embodiment of this invention, the system and method for accessing the Television Sub-Division schedule information from one or more file servers of a computer network like the Internet or World Wide Web are provided. Via the computer system connected to communication links, such as a telephone line, television systems, PCTV, or an easy display, a television information guide can be accessed and can be seen. As for the Television Sub-Division schedule guide, it is preferred to memorize as one or more files (for example, website) of one or more file servers connected mutually on the network which can be accessed by any televiewers who access a network. The Television Sub-Division schedule guide or a website may be constituted so that information may be downloaded to the local processor which could be constituted so that he might watch television information directly on-line and it might have a dialog with it, or was connected to televiewer Interface Division. A guide or a website gives listing information to all the channels in a televiewer's local cable lineup. The website can also form personal TV listing which has search and the sorting feature that a televiewer can

call favorite program selection based on a classification like a channel, a day, an actor, the genre of a movie, or the category of other requests.

According to another embodiment of this invention, the system and method of linking the televiewer of television to a broadcasting station and an advertiser directly are provided during broadcast of commercials or a program. Televiewer Interface Division like Television Sub-Division by which the system was connected to Television Sub-Division, a computer, PCTV, or a computer system in this embodiment, It has the communication apparatus for connecting this televiewer Interface Division to the Internet or a computer network like World Wide Web.

It is connected to a computer network, or the database or network server of the Television Sub-Division guide is directly linked with televiewer Interface Division, and supplies the Television Sub-Division schedule information to a televiewer. Televiewer Interface Division searches and retrieves information from the Television Sub-Division guide-data base or the commercial database connected to the computer network, and has a memory and a processor with the suitable software (not shown) for having a dialog with it. Or when a televiewer enables it to access the application or the applet (for example, JAVA (registered trademark) applet) which has suitable software for this function to perform the Television Sub-Division schedule guide on a display, again, It may be carried out via a computer network.

In the above-mentioned embodiment, a commercial donor (for example, Budweiser) and/or a television broadcasting station (for example, ABC) may have the database connected to televiewer Interface Division. Thus, the televiewer can do direct access of these databases, during broadcast of a TV program, or while a televiewer browses the Television Sub-Division schedule guide. For example, the televiewer can purchase goods and service through the distribution system provided by the direct or Television Sub-Division schedule guide through the sponsor of commercials. The advertisement of this form can target a program with a specific advertiser direct, and a televiewer can do direct buying of the goods between that advertisement. As a result, a televiewer loses his forgetting an advertisement, after commercials or a program is completed, or only losing the motive to consume money or to require information.

The easy explanatory view 1 of Drawings is a circuit diagram of a typical computer system connected to television systems.

Drawing 2 is a figure showing an example of the Television Sub-Division schedule guide displayed on the computer screen with user input equipment.

Drawing 3 is a figure showing the computer accessories of a computer system.

Drawing 4 is a figure showing the recording equipment connector for television systems.

Drawing 5 is a process flowchart of an installation procedure.

Drawing 6 is a process flowchart for operating a schedule/control system.

Drawing 7 is a figure showing many composition for giving the Television Sub-Division schedule information from a database to Television Sub-Division for a display.

Drawing 8 is a figure showing the interactive Television Sub-Division schedule system by this invention incorporating the cable system connected to television systems.

Drawing 9 is a figure showing the desirable composition which supplies the Television Sub-Division schedule information to Television Sub-Division from the cable system of drawing 8 in order to display on a televiewer.

Drawing 10 is a figure showing the system and method of accessing the Television Sub-

Division schedule information in the network file server of the Internet.

Drawing 11 is a figure showing roughly a system and a method for the advertiser and program sponsor, and televiewer of commercials to have a dialog within the Television Sub-Division schedule information system of this invention.

Drawing 12 A and 12B are the schematic views showing respectively the typical program guide and channel guide for using it for the television systems of drawing 1.

Drawing 13 A thru/or 13C select a program information menu, shifts to the program guide of drawing 12 A, and is a schematic view showing the method for browsing the information menu from other programs.

Drawing 14 A thru/or 14E are the figures showing a video-on-demand menu and the sub mode menu relevant to it.

Drawing 15 A thru/or 15C are the figures in which accessing a mail message and showing the method of transmitting.

Drawing 16 A thru/or 16C are the figures in which accessing a service menu and special service and showing the method for purchasing items.

Drawing 17 A thru/or 17F are the figures showing the system and method for linking a program in context in the database of a computer network.

Detailed explanation this invention of a desirable embodiment is the system and method for supplying the Television Sub-Division schedule information to a televiewer, A televiewer links to a remote database, a computer network, an on-line server, for example, the Internet, or the information in the network server of World Wide Web, searches and chooses, and provides the system and method of enabling it to have a dialog. The Television Sub-Division schedule information can be displayed on various televiewer Interface Division, such as a television screen, a computer monitor, and a PCTV screen. The Television Sub-Division schedule information A televiewer's computer, Television Sub-Division, It can also memorize to PCTV or a remote server (for example, website), or the Television Sub-Division schedule information can also be downloaded from a remote database or a computer network to a televiewer's computer, Television Sub-Division, or PCTV. The suitable Television Sub-Division schedule system or video guide which can be used for this invention is indicated by US,5,353,121,B which is taken up as reference here and which was transferred in common, and No. 5,479,266. The system and method of this invention are useful also to the video guide which can be obtained in the name of SuperGuide (registered trademark) from North Carolina and Shelby's Super Guide Corporation.

In one embodiment, this invention has incorporated the interactive computer system which is help, when a televiewer links with a database using the Television Sub-Division schedule information and searches and retrieves information. Preferably, this information relates to the Television Sub-Division program within the Television Sub-Division schedule information in context. If the accompanying drawing shown with the reference number with the same, same element is explained in detail, the typical Television Sub-Division schedule system 2 for using it for the context link system and method of this invention is shown in drawing 1 thru/or 7. The schedule system is provided with the computer system 10 connected to the television systems 30 as shown in drawing 1. This computer system 10 is provided with the standard computer 12 which are available personal computers (for example, the IBM correspondence, Macintosh, etc.), for example. This computer 12 can also be arranged in a set top box (for example, DSS box).

This computer 12 is provided with the hard drive 14, the processor 16, and the disk input 18 for supplying various additional software to the computer 12. A viewer enables it for the input device 20 to have a dialog with the computer 12 and/or the Television Sub-Division schedule guide (with reference to drawing 12 thru/or 17, it explains below). The line 23 is connected to the usable serial of the computer 12, and the dataport 23 of parallel or others. This line 23 is used for connecting other equipment/parts to the computer 12.

In another embodiment, the computer system 10 is combined with the television systems 30, and forms PCTV. A processor may comprise this embodiment so that a computer may perform other applications, such as a word process and graphics, including the processor alone used so that a program guide and its related software may usually be performed. A computer is built into a television set, therefore can usually use the display of television for both a television screen and a computer monitor. Or Television Sub-Division is built into a computer and a computer monitor may be made to perform this double function. Usually, PCTV contains the input device of a keyboard, a mouse, and a large number like remote control equipment like the above. However, these input devices may be combined to the single equipment which operates [ key, trackball, pointing equipment, scroll mechanism, and voice ], or inputs a command in the combination.

The television systems 30 contain Television Sub-Division 32 which is commercial Television Sub-Division, and the user input equipment 20. The television systems 30 may also contain a videotape recorder (VCR), and do not need to contain it. According to this embodiment, VCR34 and 36 are connected to Television Sub-Division 32. Commercial VCR may be sufficient as these VCR34 and 36, or the recording equipment (an analog or digital) of other forms may be sufficient as it, for example. A viewer enables it for the input device 20 to have a dialog with Television Sub-Division 32, VCR34, and/or VCR36. The input device 20 is remote control, a keyboard, a mouse, or voice operation Interface Division. The input device suitable for using it for this invention is indicated by the U.S. patent application (application number undecidedness, representative DOKETTO No.14774-004000, and 005500) of the June 17, 1996 application taken up as reference here. The line 37 is used for connecting other equipment to VCR34. Other equipment is also connectable in series between VCR34 and Television Sub-Division 32 through the line 38. In this composition, the computer 12 (or computer system 10) and Television Sub-Division 32 (or television systems 30) can be arranged in a different room in an individual dwelling or a commercial building.

In one embodiment, the computer program provided in a diskette, CD ROM, or other media includes software required to receive, compose and display the data of the Television Sub-Division schedule guide. It is inserted in the disk input 18, the software of these diskettes is memorized by the hard drive 14 within the computer 12, or these diskettes are memorized by other mass-storage positions. A user or a trained service personnel can perform this operation, for example. A computer program can also be given via the transmission by the download, the Internet, or other on-line services from the satellite 24, or transmission by the ground lines 22 of another form (for example, a coaxial cable, a telephone wire, an optical fiber, etc.), for example.

In order to generate and maintain the Television Sub-Division schedule guide in addition to a computer program, the data and other associated data (for example, data about specific show) of fundamental schedule information are needed. These data is received

through the line 22 by a desirable embodiment, and they can also be supplied by the satellite broadcasting from the satellite 24. The Television Sub-Division schedule information and its associated data can also be directly transmitted to Television Sub-Division 32 through the satellite 24. It is not necessary to transmit the Television Sub-Division schedule information and its associated data to the television systems 30 from the computer system 10 in this composition.

In one embodiment, the line 22 is a telephone wire, for example, gives access to the Internet or other on-line services through the usual modem, or gives modem access directly to a schedule donor. Subsequently, schedule data are directly supplied to a viewer from a purveyor of service through the Internet or other on-line services from a remote database. As described above, other ground lines which can supply data to a coaxial cable, an optical fiber, or the computer 12 may be sufficient as the line 22, for example. The software program saved to the hard drive 14 ranks second, uses the data received through the line 22, and forms the Television Sub-Division schedule guide. The user can search this formed Television Sub-Division schedule guide, when required.

Drawing 2 shows an example of the Television Sub-Division schedule guide displayed on the computer screen with user input equipment. In a desirable embodiment, the Television Sub-Division schedule information is given to the computer screen 50 by grid-like display. In this example, various channels are given to the Y-axis of a grid guide, and various time is given to the X-axis of a grid guide. This display includes the special command for a user in the screen area 52, and it includes the advertisement turned to the screen area 54 at a user. The Television Sub-Division schedule guide of drawing 2 is customized by the user so that only the channels 2, 3, 4, 5, and 7, HBO, SHO, and PBS may be contained in a display guide. In one embodiment, Television Sub-Division in the computer system 10 or the television systems 30 can be used as the computer screen 50. The user can scroll the Television Sub-Division schedule information given to the grid guide through the input device 60. The user input equipment 60 is the pointing equipment (for example, mouse) or the speech recognition input of a keyboard with an arrow key, and a computer, for example. By using the user input equipment 60, the user can classify the customized special lineup of the channel in the Television Sub-Division schedule guide displayed on the computer screen 50, and can mix, and can constitute. The user can also choose a program which can also side with a desired program automatically or is different for automatic recording.

automatic tuning and the further information on automatic recording -- the [ United States patent ] -- B1 Please refer to No. 4,706,121, and U.S. patent application 08th / No. 423,411. This patent and patent application are transferred to StarSight Telecast, Inc. like this invention. the [ United States patent ] -- B1 No. 4,706,121, and U.S. patent application 08th / No. 423,411 are used here by referring to the whole for all the purpose. According to another embodiment of this invention, Television Sub-Division/video board which contains a tuner in the computer 12 are provided. When this Television Sub-Division/video board have been arranged at the computer 12, the computer user can see selected Television Sub-Division program / show in the computer monitor 50. So, if a user chooses the Television Sub-Division program to automatic tuning, Television Sub-Division/video board will be aligned with the channel which conveys the selected Television Sub-Division program, and the selected Television Sub-Division program will be automatically displayed on the computer monitor 50.

In the embodiment of this invention shown in drawing 1, since two VCR34 and 36 exist, two programs sent simultaneously are automatically recordable. The user should just choose two programs for record, and this invention makes a program record automatically in the uninhabited state, when a program is broadcast. The user can choose directly which equipment (one or more) is recorded or aligned to each selected program. For example, a user records M.A.S.H.62 by VCR34 and wishes to record 64 by VCR36. this example -- the computer software of the hard drive 14 -- the time of onset of a program -- (1) -- VCR34 is aligned with the channel which broadcasts that "I LOVE LUCY", and (2) VCR34 is made one, and the recording function of (3) VCR34 is operated. Software aligns VCR36 with the channel which broadcasts (1) M.A.S.H. almost simultaneous, and makes (2) VCR36 one, and "I LOVE LUCY" operates the recording function of (3) VCR36, M.A.S.H., simultaneously in starting.

M. At the time of the end of a program of A.S.H., software turns "OFF" a recording function and turns "OFF" VCR34. When it becomes the program end time of "I LOVE LUCY", the same sequence is performed to VCR36.

According to a desirable embodiment, a schedule/control system is formed using two electronic devices. These two electronic devices enable it to have a dialog between the computer system 10 and the television systems 30. The 1st electronic device is computer accessories.

And the 2nd electronic device is a videotape recorder controller / connector (VCR connector).

The 2nd electronic device may be the Television Sub-Division connector, a set top box connector, etc.

Drawing 3 shows the computer accessories of a computer system. The computer accessories 70 are the external hardware which can control Television Sub-Division 30, VCR34, and/or VCR36. According to a desirable embodiment, the computer accessories 70 are connected to the computer 12 through an usable serial and the port 23 of parallel or others. The clock 72 arranged in the computer accessories 70 in a desirable embodiment maintains current time. The battery 74 supplies electric power continuously, when the power supply in which the normal use of computer accessories is possible does not exist. The memory 76 contains a key parameter required to record the selected Television Sub-Division program, and/or align with it. These parameters include which peripheral equipment should be turned to record or viewing and listening of the date of a program, the start time of a program, the finish time of a program, the television channel that broadcasts a program, and a program.

The processor 80 by which this has also been arranged in the computer accessories 70 uses the software of a computer system, and gives these key parameters to the memory 76. The memory 76 is random access memory (RAM).

And the RF transmitter 78 is the same as the transmitter formed in the portable telephone or RF wireless headphone, for example.

The RF transmitter 78 may be replaced with IR radiator, a modulated light signal (that is, pass an optical fiber signal sent), or fixing cloth line connection, for example. According to a desirable embodiment, the RF transmitter 78 is used in relation to the VCR connector 90 of remote arrangement, and communicates automatic tuning and/or a parameter required for automatic recording to the television systems 30. The processor 80 uses the clock 72 and the memory 76, and gives the information which needs to be transmitted



with the RF transmitter 78.

Drawing 4 shows the recording equipment connector for television systems. According to a desirable embodiment, the recording equipment (for example, VCR) connector 90 is connected to VCR34 of the television systems 30 through the line 37. This connector 90 may be the Television Sub-Division connector connected to Television Sub-Division 32. The VCR connector 90 contains the RF receiver 94 which receives the information transmitted from the RF transmitter 78. The infrared (IR) driver 96 operates in relation to the IR radiator 98, and gives a signal required for other peripheral equipment in the television systems 30. The processor 99 supports this process.

For example, when a user judges that Television Sub-Division is scheduled that Television Sub-Division should be sided with a certain program acquired now, or it should side with a certain program in the future. A user moves cursor to the show of the request in the computer screen 50 with the user input equipment 60, and inputs it (it is an "input" about a key with a keyboard).

It carries out or "it clicks" with a mouse. This information is sent to the computer accessories 70 through the line 23, and is automatically transmitted to the RF receiver 94 through the RF transmitter 78. IR driver 96 and the IR radiator 98 take out information from the RF receiver 94, and align Television Sub-Division 32 with the channel which broadcasts the selected TV program promptly. About this invention, two or more IR drivers 96 can be used. For example, one IR driver is used for Television Sub-Division 32, and another IR driver is used for VCR34. The computer accessories 70 and the VCR connector 90 (or another equipment which gives those functions so that it may state below) can be arranged in a different room in an individual dwelling or a commercial building.

When a user chooses a program from a computer so that it may record on VCR34, the information for operating and recording VCR on it at the time of onset of the selected program passes through the VCR connector 90 from the RF receiver 94, and is automatically transmitted to VCR34 through the line 37. therefore -- in a desirable embodiment, (1) VCR is made "one" at the time of onset of the selected program -- (2) tuners (or external device)

It aligns with the channel which broadcasts the program as which \*\*\*\* was chosen, and the recording function of (3) VCR operates. After that, if it becomes program end time, the recording function of VCR will be turned "OFF" and VCR will be turned "OFF." In this composition, IR driver 96 and the IR radiator 98 are not used.

In a desirable embodiment, when IR driver 96 and the IR radiator 98 are used, they function as functioning as remote control controlling other peripheral equipment (for example, Television Sub-Division 32, VCR36 grade) in the television systems 30 similarly. for example, -- when chosen for orbital record of two programs produced simultaneously, IR driver 96 and the IR radiator 98 align the tuner of the (1) 2nd VCR with the channel which broadcasts the selected program -- etc. -- it is used like \*\*. Please refer to US,5,151,789,B of Mr. Young who uses here by referring to the whole to all the purposes for the additional information on the ability of IR radiator to be used [ how ] so that it may function as remote control.

According to another embodiment of this invention, the VCR connector 90 is connected in series between VCR34 and Television Sub-Division 32 through the line 38. In this composition, IR driver 96 and the IR radiator 98 are not needed. It is because the

information received by the RF receiver 94 can be transmitted to VCR34 or Television Sub-Division 32 through the line 38. For example, the line 38 is used for transmitting the information for automatic tuning. When it chooses so that a user may view and listen to a TV program promptly, the alignment command for switching the tuner of Television Sub-Division to the channel which broadcasts the program of the request is sent to the RF receiver 94 from the RF transmitter 78. Subsequently, the processor 80 transmits this alignment command to Television Sub-Division 32 through the line 38 from the RF receiver 94.

According to another embodiment of this invention, IR driver 96 and the IR radiator 98 are arranged at the computer accessories 70 (drawing 3). When this composition exists, the VCR connector 90 becomes unnecessary. For example, when a desired TV program is chosen for automatic tuning, it collaborates so that Television Sub-Division 32 may be aligned with IR driver 96 and the IR radiator 98, and the channel that broadcasts a program to the request. the case where similarly it is chosen for automatic recording of a desired TV program -- IR driver 96 and the IR radiator 98, and its request -- the time of the start of a program -- (1) -- aligning VCR with the channel which broadcasts a program to the request -- etc. -- it becomes \*\*. This composition can be used also when chosen for automatic recording of the TV program of a request of a large number broadcast simultaneously. This is performed like the above. If it is a request, it can compose to a desired format, and can transmit to Television Sub-Division 32 through the computer accessories 70, and the data which gives the Television Sub-Division schedule information to the computer 12 can be promptly displayed on Television Sub-Division 32. About the automatic display of Television Sub-Division 32 in this composition, the computer accessories 70 must contain the onscreen display generator (OSD) 82.

According to another embodiment of this invention, the computer accessories 70 are arranged in the computer 12 (see the RF transmitter 78 and drawing 1 which have been arranged at the computer 12), and/or the connector 90 is arranged in VCR34 or Television Sub-Division 32, for example. The position of the computer accessories 70 and the VCR connector 90 is not important. It is because IR radiator can operate all the peripheral equipment by remote control.

According to another embodiment of this invention, the parts of both the computer accessories 70 and the VCR connector 90 are arranged in the computer 12. So, the RF transmitter 78 and the RF receiver 94 are not needed. Probably, an internal battery and a clock are formed, therefore the battery 74 and the clock 72 of the computer 12 are unnecessary. The memory 76 can be formed by the hard drive 14. Since the processor 16 can perform the function, the processor 80 becomes unnecessary. According to this embodiment, IR driver 96 and the IR radiator 98 give alignment and a recording parameter to Television Sub-Division 32 and VCR 34 and 36 (about the case where IR driver 96 and the IR radiator 98 are arranged in the computer 12, it is referring to drawing 1). Similarly, in this composition, when the computer 12 contains Television Sub-Division / video board 19, you can watch the selected TV program on the computer screen 50. The selected TV program is memorizable within the computer 12 to a memory or mass-storage equipment (for example, the hard drive 14, a disk, or a tape). Therefore, it becomes unnecessary [ transmission of a parameter required for automatic tuning and automatic unmanned record ], and IR drivers 96 and 98 relevant to it do not exist. Eventually, the computer 12, Television Sub-Division 30, VCR37, and all the additional

electronic devices can exist in a home network. In this composition, it becomes unnecessary [ a transmitter or inside receiver ].

Drawing 5 is a process flowchart of an installation procedure. The sequence used for this process flowchart installing a computer program required to receive, compose and display the grid guide of the Television Sub-Division schedule information is shown. This installation process flow takes into consideration fee collection setting out and download of schedule information. In a desirable embodiment, data required for the Television Sub-Division schedule guide is downloaded to the hard drive 14. As mentioned above, it is put into the diskette which gives a computer program by the disk input 18, and it is installed in the hard drive 14. Subsequently, a user is asked inputting various information. First, a system requires a user's zip code in Step 110. In Step 120, calculation information is required and a payment method and the payment information relevant to it are required in Step 130. In another embodiment, whenever a user connects with an on-line service, calculation information, including for example, credit handling attention information etc., is inputted. An automatic check is performed in Step 120. For example, the user may already have had an identification number from former system usage. A system enables it to access the memorized user profile information in which the check of this identification number contains a user's calculation data. According to a desirable embodiment, the modem speed for communication setting is required in Step 140 (this step is arbitrary). A computer program confirms in Step 150 whether an update time interval is required in relation to the processor 16. An update time interval determines how the Television Sub-Division schedule guide information is frequently updated to a user. For example, whenever the boot rise of the computer 12 is carried out, updating can be performed 4 times for 1 time or a week on the 1st. When an update time interval is needed, in Step 160, a demand is sent to a user. When a time interval is not needed, connection with a main site is made in Step 170. A main site supplies the data needed for the Television Sub-Division schedule guide, and receives information like a credit card number through the line 22 for the calculation purpose. The user can choose any of an usable channel are displayed on the computer screen 50 in Step 180. Therefore, the user can customize the displayed information in Step 180. Subsequently, it is asked whether a user inputs the IR code in Step 190 or it chooses. These IR code is used for communicating with the peripheral equipment in the television systems 30.

According to a desirable embodiment, these IR code is sent to the memory 76 in the computer accessories 70. Subsequently, in Step 200, data required for the Television Sub-Division schedule downloads through the line 22. In Step 210, the processor 16 and the computer program installed in the hard drive 14 collaborate so that the schedule guide for displaying on the computer screen 50 may be formed.

Drawing 6 is a process flowchart for operating a schedule/control system. In Step 250, a user installs this by connecting the computer accessories 70 to the computer 12 through an usable serial or the parallel port 23. In Step 260, a user installs this by connecting the VCR connector 90 to VCR34 through the line 37. In Step 270, the disk input 18 is used and software required to receive, compose and display the data which gives the Television Sub-Division schedule guide of a system to the hard drive 14 is supplied. This software also gives the automatic tuning of this invention, and automatic unmanned record. Therefore, this software is taken out from a diskette, and is memorized / installed

at the hard drive 14. In Step 280, a user or a trained service personnel performs installation/setup steps shown in drawing 5. In Step 290, data required to update schedule information is received through the telephone line 22.

In Step 300, the user can input the display parameter of an additional request, in order to display the Television Sub-Division schedule guide. For example, the user can also remove some channels from the displayed Television Sub-Division schedule guide, or the user can also choose a specific order to each of the television channel in a guide. In Step 310, according to a user's demand, the Television Sub-Division schedule guide is displayed on the computer screen 50, as shown in drawing 2. In Step 320, the user can input selection from the Television Sub-Division schedule guide through the user input equipment 60. The user can choose the program for automatic tuning or automatic unmanned record. In Step 330, it is determined whether the software of the time for automatic tuning or record is equal to current time. When program start time is not equal to current time, software stands by in Step 360. When time is equal to current time, software performs automatic tuning or automatic recording in Step 340. Automatic tuning and automatic recording are indicated by above-mentioned U.S. patent application 08th / No. 423,411. Now, the process flowchart of drawing 6 is ended.

According to another embodiment of this invention, the computer program arranged at the hard drive 14 can supervise and pursue a user's selection, for example. This computer program is used for ranking second and giving a user the suggested TV program. If it is a request, the computer program can schedule the suggested TV program automatically because of automatic tuning and/or automatic unmanned record.

Drawing 7 shows many composition of this invention which supplies the Television Sub-Division schedule information to Television Sub-Division from an external database for a display. In one embodiment, an online information provider (\*\*s, such as Prodigy, American on-line, a party serve, MSN, and AT & T) accesses to a database including the Television Sub-Division schedule information. These online information providers can transmit data to Television Sub-Division 400. According to this embodiment, data is supplied using the modem in the accessories 402. The accessories 402 are attached to Television Sub-Division 400, and are directly linked with the telephone wire 408 via a modem.

The modem for accessing to an on-line service can also be arranged in Television Sub-Division 400. The software located in either the accessories 402 or Television Sub-Division 400 is used for searching data and supplying, and it brings about other features of a large number described below.

The usable data displayed on Television Sub-Division 400 can emulate what the on-line user of a computer usually sees, when accessing the Internet via a personal computer. These Television Sub-Division schedule data can improve further "so that it may combine with the show of the television to which a user views and listens." Or the accessories 402 can also be replaced with the accessories 422 attached to the set top box 420 (for example, cable box) again. The data given through an online information provider is transmitted to Television Sub-Division 100 through the line 110. Similarly, the accessories 432 attached to VCR430 can be used for obtaining the Television Sub-Division schedule data. This data ranks second and is transmitted to Television Sub-Division 400 through the line 450 from VCR430.

In another embodiment, a database with the Television Sub-Division schedule

information is arranged at the memory 406 in Television Sub-Division 400. The controller 404 can be used for obtaining data from the memory 406 and displaying it on Television Sub-Division 400. Or a database with the Television Sub-Division schedule information can also be arranged again in the memory 426 (inside of the set top box 420), or the memory 436 (inside of VCR430). It is used for obtaining data, data ranks second, and the controller 424 or the controller 434 is sent to Television Sub-Division 400 through the line 440 or the line 450 for a display. So, the technology which enables it to supply the Television Sub-Division schedule information to Television Sub-Division from a database for a display is not specific to any given data systems. If it summarizes, this technology can reside in a user's set top box 420, Television Sub-Division 400, VCR430, a personal computer, etc. permanently.

The Television Sub-Division schedule information supplied from the database can be used, and the independent information can be formed with a viewer's program selection. For example, from the Television Sub-Division schedule guide, the user can use the remote control 410 and can push a service button. This service button can also be arranged to the remote control 410, or can also be arranged in the Television Sub-Division schedule guide display. When a service button is pushed, selection of news, the weather, a sport, a score, financial data, local traffic information, etc. is given to a user. The remote control 410 is used, a user ranks second, and interested field or title can be chosen, and pertinent information is given from a database. When the accessories 402 are used, a modem accesses the on-line service which supplies information from a database. When this connection is made, a user has an online service provider and both-directions connection. Subsequently, the user can start given selection deeply, is required for it, and when the keyboard 462 can be used, can access the Internet and can go into a chat room or other dialogue services. According to a desirable embodiment, the keyboard 462 is an IR keyboard or is connected to the port 460 of the accessories 402.

According to another embodiment, the title of a TV program and/or the contents of the program are linked to an on-line service or an usable database in context. In this composition, a user is an electronic program guide (or navigation system).

In relation to the data which was alike and was made more nearly usable, especially it related to the title of the program or the program, the further information about interested field or matter can be linked, and can be searched and chosen. According to a desirable embodiment, the user of an electronic program guide (for example, it is above) can search the information and other pertinent information about a theme on the information about the show of specific program/television or show, a player, an actress, and show by selection which passes through a user interface. When the title of a program can be accessed in an electronic program guide, it can perform linking the title of a program, and/or the contents of the program to additional pertinent information in this way. This link motion can be used when a user demands it through the program which aligned now. For example, the user who looks at the preview of a program like a movie (for example, "Casablanca"), (1) the player of the movie and an actress, and (2) -- other movies broadcast during the same period, and (3) -- the information about the advertisement or promotion pass the seller of the goods which can be obtained in relation to it, the travel package relevant to it and (4) (5) primary, secondary, or a third party can be retrieved. The remote control 410 or a user interface like the keyboard 462 is used, and the user can direct what kind of information like to see in Television Sub-Division 400 in an

electronic program guide. Subsequently, an electronic program guide lists the choice to a user. good -- better -- in an embodiment, these choices can be changed via the supplier of an electronic program guide in relation to the context of the selected program. in "Casablanca" -- these choices -- the movie of the Humphrey VOGAD besides (1), the movie of the Lorain vocal besides (2), and (3) -- other movies broadcast during the same period, or (4) -- they are the goods relevant to it. A user performs selection from the shown choice, and furthermore an electronic program guide is related with an user choice, it contacts and communicates in the database of information usable for detailed information. If contact and communication are established between a user and the database of usable television information, an electronic program guide will work as an agent, and it will be secured so that information flow and suitable data may be exchanged. In this point, the user can investigate still more deeply to usable information by selection from a series of another choices or related topics. For example, when a user chooses from the option of the movie of the Humphrey VOGAD besides (1), an electronic program guide contacts the database with which usable information was chosen, and communicates. Subsequently, the required data of the movie of other Humphrey VOGADs is collected using the database of usable information. The selected choice is transmitted and it is used by the electronic program guide as a context standard for a search.

Subsequently, the list accompanied by a search result is displayed on Television Sub-Division 400.

If a user looks at the list of movies of other Humphrey VOGADs, the user can choose either of the usable titles for record or viewing and listening. According to a desirable embodiment, the movie before chosen whenever it contacted and searched in the usable database is discriminable. The user can choose the program of a certain form to which it should be recorded, or viewed and listened, before a specific program is acquired by the electronic program guide. Whenever connection with an on-line service is made, software can search a database, and the program of a selected form which should be recorded can be set. These features can never overlook the program of liking [ consumers ].

The system and method of this invention are constituted so that the Television Sub-Division schedule guide may be automatically customized manually to the group of each televiewer or a televiewer, for example, a family. According to this embodiment, remote control equipment can be used, and some programs can be chosen, and a memory memorizes a TV program with the selected televiewer. When what is reminded so that a program may be specified as a favorite thing or it may view and listen to a program is allotted or the Television Sub-Division schedule system contains recording equipment, a program, In order to record a program, it can choose for various Reasons for allotting what is automatically recollected to a program guide. The user can also customize specific liking based on the title of a program.

The electronic program guide can choose the program, the title, or service in which the user will probably get interested via a series of repetition operations. This is executable by the user interface that a user replies to the question of liking or selection, or the heuristics performed through an electronic program guide. An electronic program guide includes the software for performing this customization.

According to the embodiment illustrated here, the system is provided with the database including each program in the Television Sub-Division schedule. A database may be

contained in the computer (for example, PCTV) combined with Television Sub-Division in one, and, It may be contained in the computer connected to Television Sub-Division through the suitable line, or a database may be accessed from a remote computer through the Internet or other communication media, for example. Within a database, each program relates to a various standard or the features, such as form (for example, action, a comedy) of a specific player, an actress, a supervisor, and a movie. When a televiewer chooses a program as a favorite thing, a televiewer has an option which specifies the standard or Reasons (namely, an actor, a supervisor, etc.) which are the things of liking [ a program ]. A computer includes the processor and the suitable software for searching a database automatically to other programs which have the same standard. A processor allots a program including the specified standard automatically to a selected window, and gives the visual indication of each program in the matrix of the cell of a program guide. Thus, a program guide customizes itself automatically to each televiewer so that the Television Sub-Division schedule may be used easily. Detailed explanation of this method can be seen to the U.S. patent application (application numbers are un-specifying and representative DOKETTO No.14774-005500) transferred [ of the June 17, 1996 application taken up as reference here ].

Drawing 8 and 9 access the Television Sub-Division schedule information from the Internet, and show the interactive Television Sub-Division schedule system 200 by this invention which can give the Internet user access. Access to the Internet is performed by this embodiment, without needing a personal computer, without tying up a telephone wire. As shown in drawing 8, the interactive Television Sub-Division schedule system 200 is provided with the cable system 210 connected to the television systems 220. Generally the cable system 210 is provided with the processor 212 and the memory 214. The television systems 220 are provided with Television Sub-Division 222 and the user interface equipment 240. The television systems 220 contain VCR224 connected to Television Sub-Division 222, and 226 like the above-mentioned embodiment. Of a specific embodiment, the memory 214 of the cable system 210 receives data, composes the received data, and memorizes the software 216 for displaying on the Television Sub-Division schedule guide by it. When the fundamental data and other associated data (for example, data about specific show) of schedule information are also needed for generating and maintenance of the Television Sub-Division schedule guide in addition to the software 216, the memory 214 memorizes. This data is received from the Internet by a desirable embodiment through the cable modem 218 which accesses data. The software 216 ranks second and generates the Television Sub-Division schedule guide using the data received from the cable modem 218. The user can search this generated Television Sub-Division schedule guide, when required.

In the embodiment of this invention shown in drawing 8, since two VCR224 and 226 exist, two programs given simultaneously are automatically recordable. The user should just choose for record of two programs, and this invention makes a program record automatically in the uninhabited state, when a program is broadcast. The user can also choose directly which equipment performs record or alignment to the each chosen program.

Please refer to for additional information US,5,151,789,B transferred [ of Mr. Young who takes up as reference here ].

Drawing 9 shows the composition which supplies the Television Sub-Division schedule

information to Television Sub-Division from the cable system 210 for a display. In one embodiment, the cable modem 218 gives access to the database which is on-line, and, as for information, a database is sent to Television Sub-Division, including the Television Sub-Division schedule information. The software 216 memorized by the memory 214 is used for searching information and supplying, and it brings about other features of a large number described below. The usable data displayed on Television Sub-Division is memorized by the memory 214 in the cable system 210, or is memorized by the database 248 in Television Sub-Division 222. The controller 252 is used for obtaining data from the memory 214 or the database 248, and displaying it on Television Sub-Division 222. From the Television Sub-Division schedule guide, the user can use the user interface 240 further and can push "service" button. This service button can also be arranged to a user interface, or can also be arranged in the Television Sub-Division schedule guide display. When a service button is pushed, choices, such as news, the weather, a sport, a score, financial data, local traffic information, and a network, are given. When using a user interface, the user can choose interested field or title, and the pertinent information from a database is given.

The user can access the Internet by choosing a network from a guide using a user network further. When the cable modem 218 accesses the Internet and connection is made, a user has bothway communications with an online service provider. Subsequently, the user can access a different on-line service. for example, a menu which the user who views and listens to a sport event pushes a service button, and is different -- the following choice, i.e., the score of (1) sport, the statistical materials of the player of the statistical materials of the present game, and (2) (3) present, and (4) -- it appears with the goods relevant to it. A user (4).

In choosing the related product, it orders software to a cable modem to notify to a cable modem and to establish connection with an online service provider. Subsequently, an online service provider, listing a series of selections relevant to a game (for example, the hat of a 49-year group.) Users, such as a baseball bat of the Giants from the Lewisville slugger and Nike spiked football shoes of pop Warner, can have a dialog with a service provider based on it.

Drawing 10 shows the system and method for accessing the Television Sub-Division schedule information from the one or more servers 350 in the Internet or the computer network 360 like World Wide Web. A television information guide is accessed on the mere display connected to communication links, such as a computer system, television systems, PCTV, or a telephone wire, and it is viewed and listened to it. In the typical embodiment, PCTV362 is shown with the user input equipment 364, such as remote control, a keyboard, and a mouse, and the communication apparatus 366 for accessing the computer network 360. As mentioned above, the communication apparatus 366 contains various data lines, such as a telephone wire and a cable modem.

The computer network 360 is provided with two or more servers 360 and databases 370 in one embodiment. Including the Television Sub-Division schedule information, this is searched, and it is viewed and listened to the database 370 by PCTV362. The server 350 expresses the file server which has a file or a database. In a typical embodiment, a computer network is World Wide Web.

Each server 350 is set up as a network file server which can carry out an address with a peculiar address.



For example, the server 350 is constituted so that a usual network protocol like a transmission-control protocol (TCP) and Internet Protocol (IP), and (generally being collectively called TCP/IP) may be followed, And a peculiar IP address or an Internet domain name is specified. For example, the domain name "invoice.com" is specified as a server.

The server 350 can also have the server software of a certain form installed in order that a system might enable it to function as an Internet graphic server. For example, the server 350 can consist of hypertext transport protocols (HTTP) so that a system can function as an Internet "World Wide Web" (WWW) server. The resource locator address in which PCTV362 uses WWW compatible software and where a system is constant in this embodiment "HTTP://www.invoice.com"

The server 350 can be accessed through WWW by directing.

According to another embodiment, the Television Sub-Division schedule guide (not shown) is memorized as one or more files by one of the servers 350, and this can access it by the viewer who accesses World Wide Web. The Television Sub-Division schedule guide or a website is constituted so that it may view and listen to television information directly on-line and may have a dialog with it, or it is constituted so that information may be downloaded to a computer hard drive or other suitable processors. A guide gives listing information to all the channels of a viewer's local cable lineup. Personal TV listing which has the search whose viewer can call favorite program selection based on a category [ like a channel, a day, an actor, and a movie genre ] whose guide is, or the category of other requests, and the desirable sorting feature (it states below) can be formed. The guide can include other information about the program of the forms (for example, suspense, a comedy, a drama, a Western, a musical, for children, a biography, horror, etc.) of viewership, a star, or a movie. This information may be given to a actual website, or a website may be provided with the means for linking a viewer to other websites in order to give the further information about a certain topics and category.

On parenchyma, since the Television Sub-Division guide web site can be accessed from any places in the world, it is preferred that the mechanism which chooses the area which can apply the Television Sub-Division guide is included. For example, the Television Sub-Division guide may also include the Television Sub-Division schedule information from various countries in the world, or an information guide may be limited to the U.S. In order to acquire the Television Sub-Division schedule information over a specific area, the user can choose a suitable state, a city, or other areas, for example, the area covered by the specific cable company. Or the Television Sub-Division schedule guide may give again the information over the network and offices which cover all all the areas of a country, such as CBS, FOX, and HBO (not being a specific channel or an office). The Television Sub-Division guide can constitute a guide from this composition automatically to a specific time [ for a user to view and listen to Television Sub-Division, including / therefore / time zone selection ] zone.

In one embodiment of this invention, a system contains the search engine with which a viewer enables it to search the program of a specific form broadcast within a certain period. This search engine contains categories, such as a channel, a player/actress, and a supervisor, a title, explanation, a category, a date, and daytime. The viewer can include the further information about a program within each category. For example, the guide can give the information on the movie in many categories, such as an object for

theaters, a work for TV movies, Spanish, and French. It can be told what kind of Clint Eastwood's movie a guide has for this week, what Star Trek work there is in this week, or whether a favorite basketball squad is reflected in TV on Saturday this week. The on-line televiewer can customize the listing of these selves by a title, a fiscal year, an actor, a supervisor, a \*\*\*\*\* theme, strict asterisk evaluation, MPAA, a warning line, a video laser disc, full explanation, a genre, and a holiday with a theme. In another example, the guide can give the information about show and series including network show, a premiere, the British, BPS, cult liking, syndicate show, a talk show, a local production, and an obscure program. The user can classify according to a title, the show time of a work, a genre, the first televising day, etc., for example.

In another feature of this invention, a website Television Sub-Division guide includes the highlight section which emphasizes the specific program broadcast during a day, a week, or the moon. For example, a guide has a web page which takes up a "hot pick" on each day of a week, and gives a picture or an image to a video hot pick with explanatory information like an editorial comment. The user can go to other fields which can give an interview with the further information, for example, a report, and a player/actress, an editor's selection criticism, notes, etc. about a specific movie.

A user enables it to converse with other users, a program sponsor, an advertiser, etc. in another feature of this invention including various files to a network server which is the same as for a system, or is different. For example, a system has a website which enables it to have a pleasant chat about a program with a televiewer (each program itself has a website of itself). The system can search the existing website of the Internet and can contain the "virtual agent" who points out the website which is interested in a televiewer. A virtual agent learns from a former user choice so that the Television Sub-Division guide may be customized for every televiewer of each specification.

Drawing 11 shows roughly the system and method by this invention for linking the Television Sub-Division televiewer with a broadcasting station and an advertiser during broadcast of commercials or a program. The system 300 is provided with televiewer Interface Division 302 like Television Sub-Division connected to Television Sub-Division, a computer, PCTV, or a computer system as illustrated. For convenience, a system is explained as what uses PCTV302. A cable modem, a telephone wire, or the data line 304 like other communication links connects PCTV302 to a remote database, a network server, or the on-line service 306, for example, the Internet. The Television Sub-Division guide-data base 308 is connected to the Internet 306 in order to supply the Television Sub-Division schedule information to PCTV302. This information may be constituted so that it may view and listen only while downloading to PCTV302 or actually connecting a televiewer to the database 308. Or from the processor in PCTV, the Television Sub-Division guide is local and may be pulled out again. As illustrated, the commercial donor 310 (for example, Budweiser) has the database which was directly linked with PCTV302 or was connected through the Internet 306.

PCTV302 is provided with the memory and the processor with the suitable software (not shown) for searching and retrieving information from a database through the Internet 306 based on a user's selection. Or this function may be performed through the Internet 306 again through the Television Sub-Division guide-data base 308, the commercial donor 310, or the broadcasting station 312. In this embodiment, PCTV, for example A computer monitor, The application or the applet which has the suitable software for performing the

Television Sub-Division schedule guide on the Television Sub-Division display or a display like other user interfaces. (For example, a Java (registered trademark) applet) can be accessed.

In one example, a televiewer views and listens to a sport event like a football game. One or more an icon or other visual indication children are stationed in the convenient position on a television screen, for example, an upper right corner. One of the icons of these is an icon showing the Television Sub-Division schedule guide. The televiewer can move to the Television Sub-Division guide icon, can click cursor or other visual indication children, and he can open the Television Sub-Division guide so that it may state in detail below. For example, another icon can also be provided by a commercial sponsor. Move to this icon, and when it operates, a televiewer, Link with the database given by the commercial sponsor, or can link with some Television Sub-Division schedule guide-data bases, and by this, The televiewer can purchase advertising goods, can contribute, can answer investigation, can reply to a question, or can participate in a contest with other televiewers, for example.

For example, Budweiser provides the database 310 with which a televiewer enables it to purchase the coupon of free 6 pack or other items, for example, the Budweiser T-shirt, a hat, etc. a televiewer needs to pass the distribution system (it states in detail below) which can also carry out direct buying of a coupon, a hat, or the T-shirt via a commercial sponsor and which carries out or is given by the Television Sub-Division schedule guide - it can also purchase. The advertisement of this form can target a program with a specific advertiser direct, and can be made to carry out direct buying of the goods between a televiewer's advertisements. A televiewer does not only lose the motive not to forget an advertisement, or to consume money or to require information after the end of commercials or a program.

The television network which broadcasts a program in another example, The advance notice of the program relevant to a program like a football game and another football game in the second half of the week which should come, Or the database 312 which gives the further information about other goods and service relevant to a football game is equipped with the icon a televiewer enables it to access.

Drawing 12 thru/or 17 show the illustration Television Sub-Division schedule system 200 accompanied by a grid guide, and shows how to use the Television Sub-Division schedule system, with the context link system and method of this invention. Of course, this invention is not limited to the specific Television Sub-Division schedule system shown in drawing 12 thru/or 17. For example, other suitable Television Sub-Division schedule systems, It is explained to US,5,353,121,B which is taken up here as the user's manual "how (Using Starsight 2) to use StarSight 2" attached to this Description as attached materials, or reference and which was transferred in common, and No. 5,479,266. However, especially the Television Sub-Division schedule system 200 shown in drawing 12 thru/or 17 is effective for the context link system of this invention. A televiewer can browse the Television Sub-Division schedule promptly and efficiently, and it is because it enables it to have a dialog with the wide range service relevant to the program of the Television Sub-Division schedule.

Drawing 12 A and 12B show the program guide 102 and the channel guide 104 for the Television Sub-Division schedule system of this invention respectively. The program guide 102 which is in primary mode of the Television Sub-Division schedule system,

Many screen information area or windows are included in a specific screen, and the televiewer operates, moves an input device like remote control vertically and horizontally, and has a dialog with the function of the screen area. One or more items are usually arranged a matrix or in the shape of a grid in each screen area, and the televiewer can scroll a grid, and can choose or operate the item in a grid. The operation of an item includes a sub menu, a dialog, a panel, action, etc.

As for the program guide 102, as shown in drawing 12 A, it is preferred to include the schedule information area 106 which has the cell or the program matrix 108 of an item which shows the show broadcast by each channel at each time on the 1st. The program guide 102 lists time conveniently to the infestation on a channel and the matrix 108 at the column on the left-hand side of the program matrix 108. As illustrated, the televiewer can scroll specific time perpendicularly with remote control equipment, or can scroll a channel horizontally. When a televiewer scrolls the matrix 108, the cursor 110 directs the position of the user within the matrix 108. Or highlight processing of the item may be automatically carried out in a bright color, and it may point to a televiewer's position. Preferably, shade attachment of the program matrix 108 is carried out so that the portion of each already broadcast show may be shown. For example, as shown in drawing 12 A, the shade is prolonged to 7:48 (current time shown in the lower right of the program guide 102), and is pointing to the portion of show which the televiewer already overlooked.

As shown in drawing 12 A, the program guide 102 is provided with a majority of other information area. For example, this directs an active mode (namely, program guide 102) now including the mode menu area 112, and a televiewer can be made for the program guide 102 to carry out pulldown [ of the mode menu 114 ] (refer to drawing 13 A).

The program guide 102 directs the date by which this is reflected in the program matrix 106 also including the date area 116, and a televiewer does pulldown [ of the date sub menu 118 ], and it enables it to change the date. In other sub modes, a sub mode menu displays the option for ordering or displaying the list related suitable for the sub mode. The proportionality scroll bar 120 located in the left of the program matrix 106 gives visual feedback, when a user scrolls the matrix 106 perpendicularly proportionally visually to all the information on the program matrix 106. The scroll bar 120 is used for large-scale movement which passes through the channel/source of a 100 number by carrying out navigation *Perilla frutescens* (L.) Britton var. *crispa* (Thunb.) Decne. to this bar 120, and moving this bar 120 to a lengthwise direction. When a televiewer does navigation to this outlet area 122 and clicks remote control equipment, it enables it to leave the outlet area 122 to Television Sub-Division promptly. The program area 126 is shown and the program which aligned now and the preview window area 128, It can be used for promotion explanatory, the context video of all the forms like the short preview of the show by which the present highlight processing is carried out in the show matrix 106, or graphics. This preview window area 128 is also a dialogue like other areas of the guide 102.

The program guide can include various additional areas for adopting easy how to use the Television Sub-Division schedule system, and showing a televiewer information, or advertizing a program and other goods. For example, the commercial message 124 which scrolls is arranged under the program matrix 106, and advertizes the goods from a program or a program sponsor, etc. A televiewer does navigation to the message 124, can

receive the further information or can purchase goods and a program.

This function to place an order for items is not limited to video. For example, a program accesses the service linked like other contexts, such as a store, and enables it to buy the extensive various different services or goods linked to the program with a specific buyer directly or indirectly. For example, "the information menu (Info Menu for Monday Night Football) for the football of Monday night", A televiewer scrolls a sub menu and enables it to purchase the hat of the Washington redskin, the Minnesota Viking's hat, or the hat of NFL. A televiewer has the selection which returns to a commercial area according to the link of a program, and items and large-scale selection of service are obtained there.

Goods like the above-mentioned hat lead a televiewer to a NFL pro shop directly, and, on the other hand, the link to movies on demand is returned to a commercial film library.

Drawing 12 B shows the Television Sub-Division schedule system of this invention by the channel guide mode. As illustrated, although the channel guide 104 is the same as that of the program guide 102, it is provided with the information screen area 130 reserved from the information screen area 106 of a program guide. Therefore, the televiewer can scroll to a lengthwise direction so that it may move forward and backward in time along with one channel, and he can scroll in a transverse direction so that it may move to a channel from a channel.

Drawing 13 A thru/or 13C access the program guide 102 from the program which aligned now, and shows the method of browsing the program which aligned now [ other ] with the remote control equipment 2. As shown in drawing 13 A, the televiewer is looking at the show of television like the football game of the Washington redskin pair Minnesota Viking's Monday night on the display screen 132. If remote control equipment is clicked, the program information menu 130 will jump out automatically on [ some ] the television screen 132 (refer to drawing 13 B). A televiewer acquires the further information about the program which is aligning now, and the program information menu 130 shifts to the program guide 102, and shifts to the service (it states below) linked in context, or enables it to return the information menu 130 to the show of television. The televiewer can scroll these options up and down perpendicularly, and can choose one of the options. For example, shortly after clicking the portion "which progresses to a program guide", a televiewer shifts to the program guide shown in drawing 12 A. In order to browse other programs which aligned now, a televiewer uses other input commands of suitable channel control or remote control equipment (not shown). As shown in drawing 13 C, the televiewer can browse other information menus, watching the program which aligned now.

Drawing 14 A thru/or 14E show how to order video on demand by the system of this invention. As shown in drawing 14 A, a televiewer opens the program information menu 130, and scrolls caudad to a "service linked" item. It ranks second to a televiewer, and as shown in drawing 14 B, he is shown the menu 162 which can scroll easily [ the items relevant to this program, and service ]. Dollar mark

It can come out and what was shown can be purchased. Free items can be promptly obtained to a televiewer.

Here, it is urged to a televiewer to the easy procedure for specifying the time when a movie should be fed. When a televiewer chooses the specific service or items which need monetary dealings, a purchase sequence opens. As shown in drawing 14 C, a televiewer is urged to input a master password/access code by the remote keypad or other means.

For example, the televiewer can let a credit card pass into the slot of remote control equipment. When this password/access code are accepted, a final opportunity to consider purchase, check a front item menu, or return to it is given to a televiewer (refer to drawing 14 D). A televiewer's check of purchase and/or an order will show the receipt 170 (drawing 14 E). The selection which returns to a front item menu or always returns to a program guide in the bottom item "0" is given to a televiewer.

. [ whether drawing 15 A thru/or 15C accept e mail message at which a TV viewer arrives, and ] Or another embodiment of this invention which transmits the message to leave to the user by whom it was connected to other TV viewers or Television Sub-Division schedule systems, for example, the user of the Internet, is shown. As shown in drawing 15 A, a televiewer scrolls to the message window of a mode menu, and does the AKUCHI bait of this window, and goes into a sub mode menu. In order to read the coming message, a televiewer scrolls to the cell "which checks a new \*\* message", and displays the message which carried out the AKUCHI bait of this cell, and received. A message mode composes the coming message in order of data receiving, and displays them on a list (refer to drawing 15 B). Subsequently, a televiewer scrolls to a specific message, as shown in drawing 15 C. In order to transmit the message to leave, a televiewer scrolls to "message preparing" cell, and does the AKUCHI bait of this cell, and opens a blank window. A message is created by inputting a text into an input device or carrying out voice AKUCHIBESHON through the microphone of an input device. Drawing 16 A thru/or 16C show how to access other various whole service on the Internet by the interactive Television Sub-Division schedule system of this invention. As described above, the database of the Internet is accessed through a telephone wire, a cable modem, or other means of communication. As shown in drawing 16 A, a user scrolls to the service mode in the world, The service from which it clicks in this mode and versatility differs, for example, news, The advance notice and examination of a program in the weather and a sport, and the Television Sub-Division schedule guide, A sub mode including other goods and service in the super mall, the Internet, or World Wide Web for purchasing the goods and service relevant to the program of the Television Sub-Division schedule guide is obtained.

As shown in drawing 16 C, a user chooses news, the weather, and a sport and this, Another menu including various special services like other services relevant to the weather of headline news, domestic, and rural areas, a sport center, business and the latest information on stock, music video, daily horoscopy, daily comics and/or news, the weather, and a sport is opened. These services are provided by the special database linked to the network server or database of online information providers, such as television systems, America Online, and Prodigy, or the Internet, and World Wide Web. As illustrated, a user chooses headline news and this opens another menu which gives a user various news reports which can be accessed. The computer system which are whether a news report looks at this, prints it out, or is attached to television systems, and its complicated portion (for example, PCTV)

It passes and downloads.

Drawing 17 A thru/or 17F show the typical system and method of linking related items and service to the specific program of the program guide 102 in context. As shown in drawing 17 A, a televiewer chooses the specific program in the guide 102, and accesses the information menu of the program. Within this information menu, a televiewer ranks

second, and it scrolls in the linked service, and clicks in this window, and shifts to a database including the items and service which related to that specific program in context. In the illustrated example, the televiewer is looking at the sport event of the Washington Redskins versus Minnesota Vikings. The personal effects of the items relevant to the game in a televiewer and service, for example, the Washington Redskins, or Minnesota Vikings, It shifts to the window which gives many options for purchasing the highlight of other games between these [ the personal effects (it can set to a NFL sport pro shop) of other NFL teams, or ] two, or other teams. Or the televiewer can also order again the tape/copy of the program shown in the present guide.

Drawing 17 C thru/or 17F show the case where a televiewer chooses the purchase of the hat of the Washington redskin. A televiewer inputs a password or other input discernment, and this is checked by a system. Or a televiewer only lets his own credit card or other selector cards pass to remote control equipment or television systems, and can also obtain purchase permission of the hat of redskin again. An order is checked and a hat is delivered by a televiewer's house.

As mentioned above, although this invention was explained in detail, it is clear that some change does within Claim. For example, the televiewer can choose a program which can side with the program of hope automatically or is different for automatic recording. automatic tuning and the detailed information on automatic recording -- the [ United States patent ] -- B1 Please refer to No. 4,706,121, and U.S. patent application 08th / No. 423,411. This patent and patent application are transferred to StarSight Telecast, Inc. like this invention. the [ United States patent ] -- B1 No. 4,706,121, and U.S. patent application 08th / No. 423,411 are used here by referring to the whole for all the purpose.

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[Translation done.]

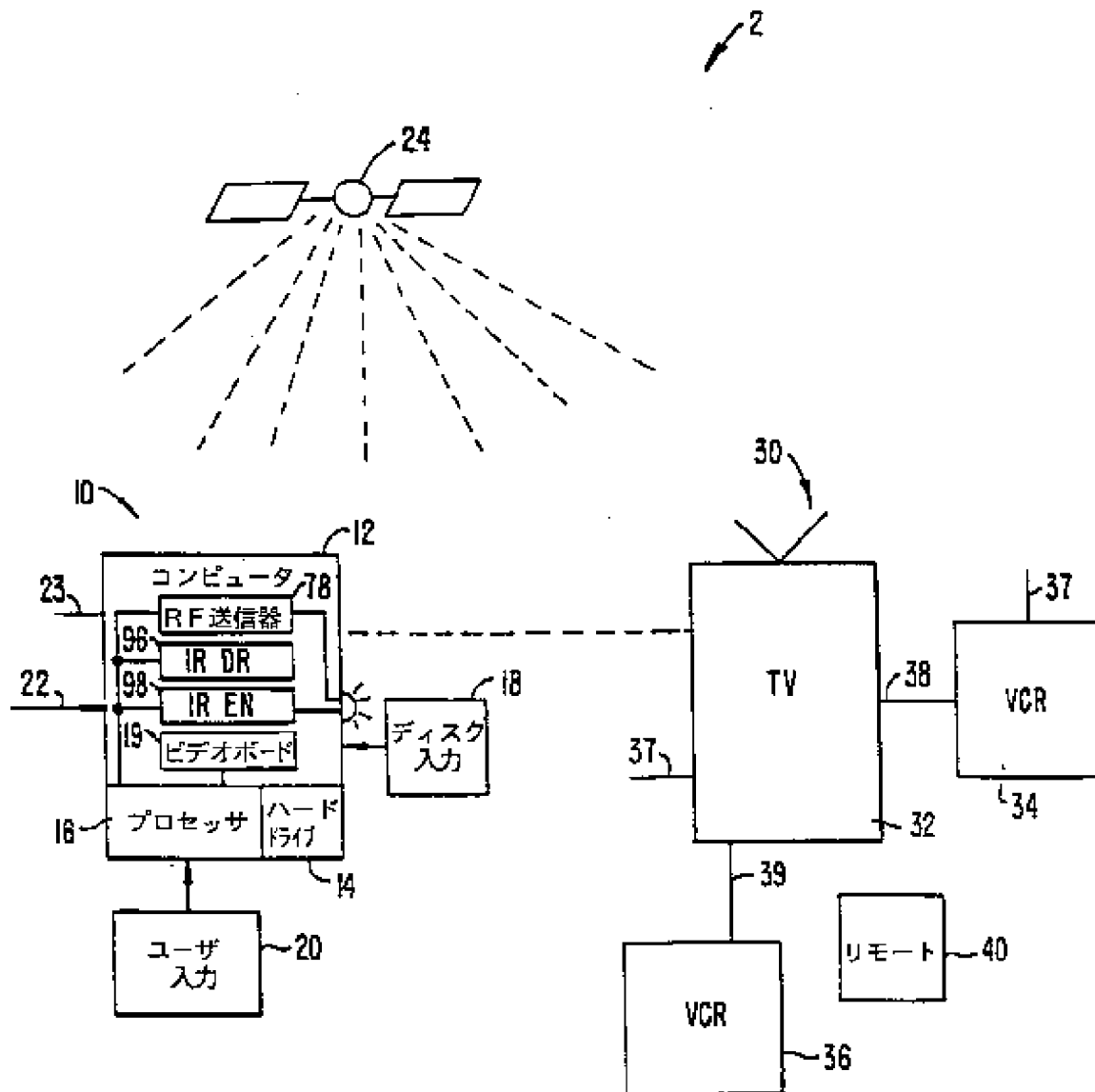


FIG. 1.